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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,437	01/05/2001	Richard L. McCreery	OSU1159-141	5136
8698	7590	03/25/2005	EXAMINER	
STANDLEY LAW GROUP LLP 495 METRO PLACE SOUTH SUITE 210 DUBLIN, OH 43017			ZACHARIA, RAMSEY E	
			ART UNIT	PAPER NUMBER
			1773	

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/755,437

Applicant(s)

MCCREERY, RICHARD L.

Examiner

Ramsey Zacharia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 44-46 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-18 and 44-46 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 05 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/11/04; 2/2/05.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-18 and 44-46 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection. No support for the limitation that the contact surface is substantially devoid of dimers oriented in a substantially identical direction could be found in the disclosure as originally filed. The mere absence of a positive recitation is not support for a negative limitation. The courts have held that the addition of a negative limitation which did not appear in the disclosure as originally filed introduces a new concept and violates the description requirement of 35 U.S.C. 112. See MPEP § 2173.05(i).

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Claim Rejections - 35 USC § 102

4. Claims 8-11, 13, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Weaver et al. (U.S. Patent 5,208,154).

Weaver et al. teach an electrode having a surface treated with an electrochemically active material that is then connected to an electrical source to allow charged particles to adsorb onto the treated surface (column 2, lines 24-35). The electrochemically active material extend out from the electrode in a substantially parallel manner (Figures 1 and 2). A preferred material for the electrode is conductive carbon (column 3, lines 57-59). Quinone, i.e. $O=C_6H_4=O$, is a suitable electrochemically active material (claim 1). Since all the bonds in quinone are conjugated, the bond through which it is attached to the surface must be conjugated.

Regarding claim 11, the term "pyrolyzed" is taken to be a process-related limitation indicating the manner in which the conductive carbon is formed. Since the determination of patentability for a product claim containing process limitations is based on the product itself and not on the method of production, the conductive carbon electrode of Weaver et al. reads on the substrate of claim 11.

Claim Rejections - 35 USC § 103

5. Claims 1, 2, 4-7, 12, 15-17, and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weaver et al. (U.S. Patent 5,208,154) in view of Wegner et al. (U.S. Patent 4,828,917).

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Weaver et al. teach all the limitations of claims 1, 2, 4-7, 12, 15-17, and 44-46, as outlined above, except for requiring the substrate to have a roughness less than or equal to the average length of the electrochemically active material and less than 5 Å.

Wegner et al. disclose that when forming a monolayer on a substrate it is known make the substrate smooth to allow for the formation of a well defined layer (column 4, lines 35-38).

One of ordinary skill in the art would be motivated to make the electrode surface of Weaver et al. as smooth as possible to ensure that the layer of electrochemically active material applied to the surface is well defined.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-18 and 44-46 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 7-11, 16, 22-30, and 56-58 of U.S. Patent No. 6,855,950 (was copending Application No. 10/376,865). Although the conflicting claims are not identical, they are not patentably distinct from each other because the inventions of instant claims 1-18 and 44-46 represent a genus of which the inventions described

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by claims 1, 7-11, 16, 22-30, and 56-58 of U.S. Patent No. 6,855,950 are species. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993). The instant monolayer material is generic to monolayer construction of U.S. Patent No. 6,855,950. Therefore, 1, 7-11, 16, 22-30, and 56-58 of U.S. Patent No. 6,855,950 represent a species of instant claims 1-18 and 44-46.

Response to Arguments

8. Applicant's arguments filed 12 August 2004 have been fully considered but they are not persuasive.

Regarding the rejection of claims 8-11, 13, and 18 over Weaver et al., the applicant argues that the quinone is bonded to the surface by a silane linkage (as shown in Example 2) which does not produce a conjugated bond but rather an aliphatic bond.

This is not persuasive for the following reasons. First, a reference must be considered as a whole for what it teaches to one skilled in the art and is not limited to preferred embodiments or working examples. Furthermore, in Example 2 of Weaver et al., the substrate is pretreated with the 3-aminopropyl trimethoxysilane prior to the attachment of the ferrocene compound. That is, the silane becomes part of the substrate to which the ferrocene compound is attached.

Regarding the rejection of claims 1, 2, 4-7, 12, 15-17, and 44-46 over Weaver et al. in view of Wegner et al., the applicant argues that neither Weaver et al. nor Wegner et al. teach a monolayer bonded to a substrate via a conjugated bond. The applicant also argues that there is no motivation to combine Weaver et al. with Wegner et al. because Weaver et al. is directed to molecular units chemically bonded to a substrate while Wegner et al. is directed to physical deposition of a film on a substrate.

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This is not persuasive for the following reasons. As noted above, Weaver et al. do teach attaching molecular units to a substrate by means of a conjugated bond. Wegner et al. is relied upon merely to illustrate that it is known in the art that, when forming a well defined structure such as a monolayer, the substrate should be smooth to allow for the formation of a well defined layer. Furthermore, the combination of Weaver et al. and Wegner et al. is proper because one skilled in the art would readily recognize that the teaching relied upon in Wegner et al. is not specific to only physically deposited films, but to any well defined structure, in particular monolayers or multilayers (see column 4, lines 35-38).

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518.

The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached at (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ramsey Zacharia
Primary Examiner
Tech Center 1700